DOCUMENT RESUME

ED 459 674 HE 034 579

AUTHOR Roberson, Thelma; Klotz, Jack
TITLE Confronting Design Problems in Developing On-Line Courses in Higher Education.
PUB DATE 2001-11-00
NOTE 7p.; Paper presented at the Annual Meeting of the Mid-South Educational Research Association (30th, Little Rock, AR, November 14-16, 2001).
PUB TYPE Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Computer Assisted Instruction; *Curriculum Design; Delivery Systems; Educational Technology; Higher Education; Instructional Design; *Online Systems; *World Wide Web

ABSTRACT

This paper outlines design problems and other instructional delivery issues that need to be addressed by potential on-line program designers, and it suggests some possible solutions to these problems. The first issue was transforming a traditional, three-credit course in a developing student-centered curriculum into a course delivered through WebCT format. WebCT was the method of choice because the university had committed resources to this format. It was necessary to train instructors to use WebCT, to plan for a team effort, and then to develop a syllabus. Technology delivery strategies were chosen, including chat rooms, Internet bulletin boards, and communication through e-mail correspondence. Other options were not selected because of practical constraints in the course situation. In the actual delivery of the course, a number of issues had to be considered: (1) students' technological capacity to function as online learners; (2) technological support for students and instructors; (3) time zone and international server problems; (4) the compatibility of America Online with WebCT; (5) firewall protection that sometimes blocked the chat function; and (6) other technological problems. The paper concludes that overall addressing these issues will help in the development of an online course that satisfies both student and instructor needs. (SLD)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 459 674

Confronting Design Problems in Developing On-line Courses in Higher Education

Dr. Thelma Roberson
The University of Southern Mississippi

Dr. Jack Klotz
The University of Southern Mississippi

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
T. Roberson
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

A paper presented at the annual meeting of the Mid-South Educational Research Association in Little Rock, Arkansas, November 14-16, 2001

HE 034 579

BEST COPY AVAILABLE

The intent of this paper is to provide a clear delineation of a series of design problems and other instructional delivery issues that need to be addressed by potential on-line program designers, as well as possible solutions to these identified problems. Additional, information will be presented that details the design evolution of one on-line graduate course.

The initial design experience was centered around transforming a traditional three credit hour lecture course into one delivered via WebCT format. The specific course in question was REF 607 - Developing a Student Centered Curriculum. According to the University of Southern Mississippi's 2001-2002 Graduate Bulletin, this course is described as: A comprehensive study of planning and procedures for developing, structuring, implementing, and evaluating school curricula. The two instructors who were selected to develop this first departmental on-line course delivery, brought to the experience a strong curriculum and instruction background at both the field level (K-12) as well as at the university level in the sense of teaching such a course in the traditional graduate class format.

At the outset the following issues needed to be addressed prior to formatting the actual course design for delivery. Among these issues were:

1. Selection of web based package for course delivery - WebCT was the method of choice given the fact that the university had committed its resources to this programmatic format.
2. Training of instructors to utilize the WebCT format- Here the university had taken the steps to provide a series of developmentally sequenced workshops to introduce potential on-line instructors to the basics of WebCT instructional delivery. Additionally, one-on-one tutorial support was also available.
3. At the outset, the instructors made a conscientious decision to develop and deliver the two sections of this course as a collaborative team effort. As will

be shared later in the paper, this was a very worthwhile decision.

4. Syllabus development - To begin with the designers examined the syllabus of the traditional course to determine how to best utilize technology in addressing the learner objectives specified in the syllabus. Because the instructors believed that the course in question had at its center the value of human interaction and real-world orientation, it was essential to select technological applications that would effectively facilitate that commitment. To the extent of that commitment an issue that had to be addressed immediately was to decide to which level the course would be delivered in a synchronous format, i.e., real time as opposed to asynchronous, which is more like independent study.

5. Selection of technology delivery strategies - After investigating all possiblitities, the following technological delivery strategies were considered:

   5.1 Chat - this option was selected as it allowed for real time communications, Socratic teaching, and group interaction.

   5.2 Bulletin Board - this option was selected as it afforded the posting of information, threaded discussions, announcements, and a place for students to display and gain feedback on their work.

   5.3 E-mail - this option was selected to facilitate personal one-on-one communications between the student and the instructors.

   5.4 Listserves - While not selected for this particular course this feature was chosen to utilize in less interactive courses and is a functional resource for group communications or sending one message to an entire group of students at once.

   5.5 Video Streaming - Due to the level of technological expertise of the

instructors and the limited university capability, this option was not selected. However, it remains a viable option when such capability becomes available at the university level.

5.6 Video Audio Conferencing - this option was not selected because of an awareness of student limited resources to acquire such Web conferencing capabilities.

5.7 Face to Face Interactions - due to the distances involved such opportunities were impractical as their requirement would have limited student accessibility and participation in the course experience.

After solidifying the content of the course, how to best utilize technology availability, and putting the course on line, the next step was that of the actual delivery of the course. Here a new set of issues had to be addressed. Among these were:

1. Student technological capacity to function as an on-line learner. First, it must be understood that all enrolled students do not come to the experience with the same level of understanding and skill development. Thus, a plan needs to be in place to assess student technology skill levels and to remediate same when and where necessary. For example, one of the first course assignments was to have students write a short biography, save in html format, and post to the course bulletin board. The content of the assignment while simple afforded the instructors with an opportunity to assess the student's ability to post documents for future assignments.

2. Technological support for students and instructors. Although instructors received training and provided some degree of technological support for students, it became clear as the course proceeded that additional university level support was needed

by some students. To that end, the instructors directed needy students to the Office of Technology Support for tutorial / help assistance.

3. Time zone and international server problems. Because the instructors wished to maintain a synchronous environment, distance learning became a challenge due to time zone and international server problems. The first was solved by dialoguing with all enrolled students to find the best (most convenient) time to hold class chat sessions. The second issue was solved by accommodating students via telephone and fax capabilities when the server in their state or country was down.

4. AOL compatibility with WebCT. It was determined early on that student use of AOL as their individual server provider (ISP) presents monumental compatibility problems with WebCT. Frequently students were bumped off of the system and/or could not access the course. The solution to this problem was facilitated by directing student to the University's Help Desk or by the student changing their ISP.

5. Firewall protection. Students who attempted to access the course through their school system's computer or in the case of their employer's computer often found themselves blocked out of the chat function due to their organization's use of firewall protection. This problem was resolved by students selecting a different location to log in or by working with their technology department to bypass the firewall during specified chat times.

6. Trouble shooting other problems. Occasionally a student reported that they could not save a file for posting to the assignment dropbox or bulletin board. This

occurred when students attempted to save a file, where the file name contained spaces. The simple solution was to eliminate all spaces within the file's name. Another problem that was encountered was that occasionally a student submitted file could not be read by the instructors . The solution here was to instruct all students to save all transmitted files in an html format, which is compatible with WebCT. Finally, the problem of viruses had to be dealt with and here the solution was to instruct all students to acquire an appropriate virus scan software package and to utilize it. Any file received with a virus was not accepted and this quickly eliminated the problem.

In conclusion, the authors fully support and encourage others to step into the pool and develop appropriate on-line versions of existing traditional courses. The caveat being that it is essential for a successful experience to first address and eliminate any of the aforementioned design and delivery problems / issues.